Dharmsinh Desai University, Nadiad

Faculty of Technology

Department of Computer Engineering

ASSIGNMENT 10

Subject: Smart Device Programming

Submitted To:

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CE Department

Submitted By:

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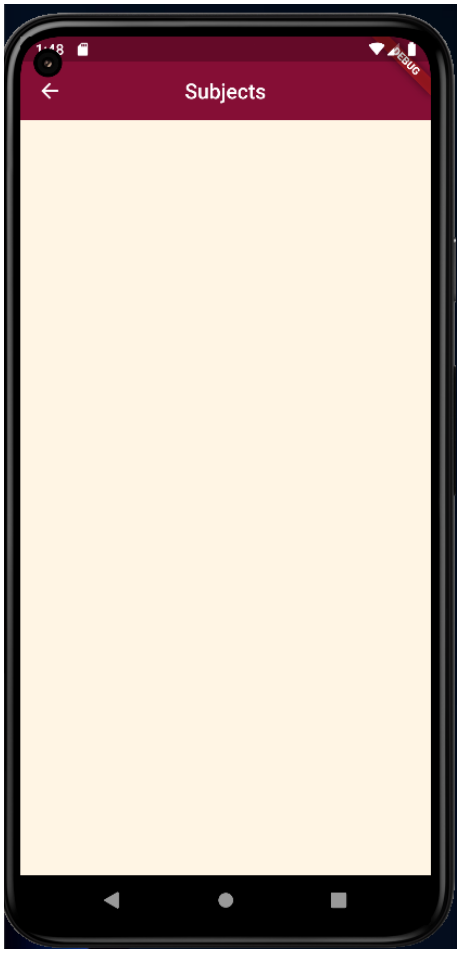
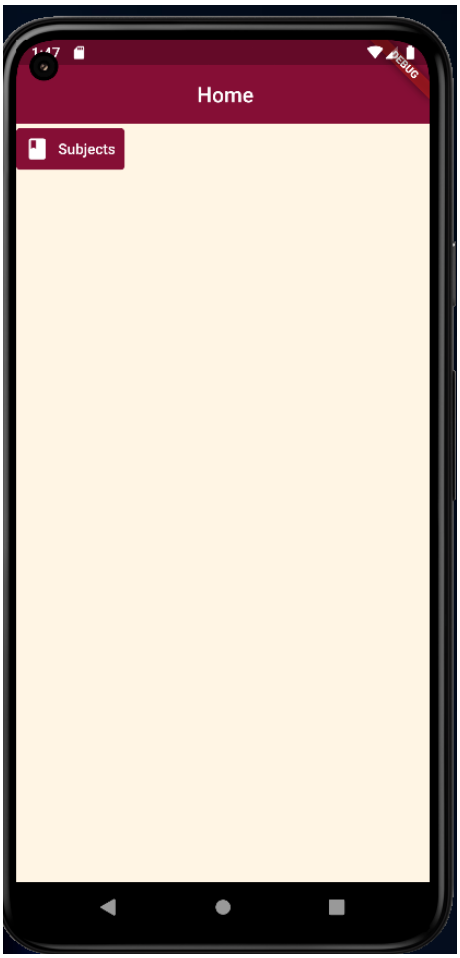
```dart
@override
Widget build(BuildContext context) {
  print('Build in subjects');
  return Scaffold(
    backgroundColor: Color(0xffFFF5E4),
    appBar: AppBar(
      title: Text('Subjects'),
      centerTitle: true,
      backgroundColor: Color(0xff850E35),
      elevation: 0.0,
    ),  // AppBar
    body: ElevatedButton(
      onPressed: (){
        setState(() {
          _count += 1;
        });
      },
      style: ElevatedButton.styleFrom(
        primary: Color(0xffFFC4C4), // Background color
      ),
      child: Text('Total Subjects : $_count '),
    ),  // ElevatedButton
  );  // Scaffold
}
```

Subjects.dart

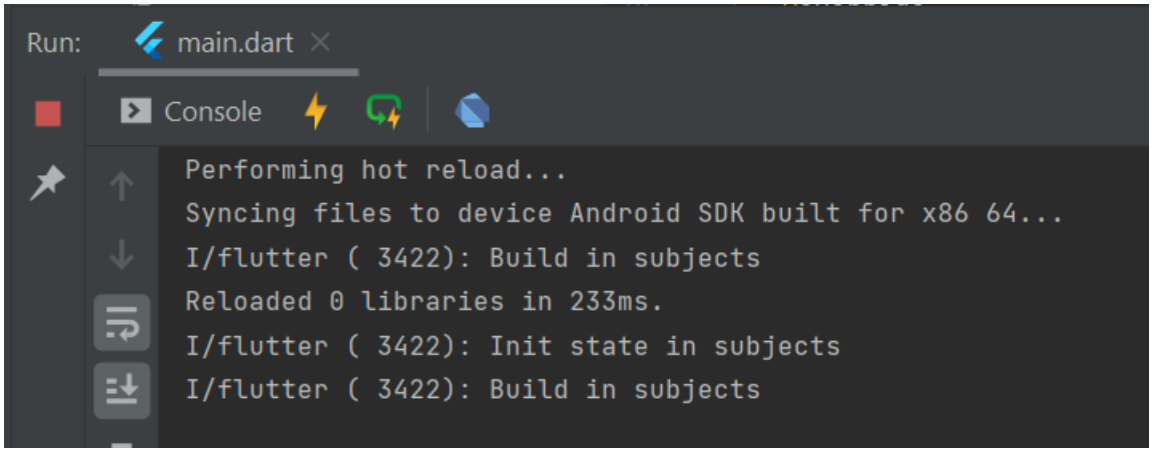
```dart
Widget build(BuildContext context) {
  return Scaffold(
    backgroundColor: Color(0xffFFF5E4),
    appBar: AppBar(
      title: Text(' Home'),
      centerTitle: true,
      backgroundColor: Color(0xff850E35),
      elevation: 0.0,
    ),  // AppBar
    body: Column(
      children: [
        TextButton.icon(
          onPressed: () {
            Navigator.pushNamed(context,'/sub');
          },
          icon: Icon(Icons.book),
          label: Text('Subjects'),
          style: TextButton.styleFrom(
            primary: Colors.white,
            backgroundColor: Color(0xff850E35), // Background Color
          ),
        ),  // TextButton.icon
      ],
    ),  // Column
  );  // Scaffold
```

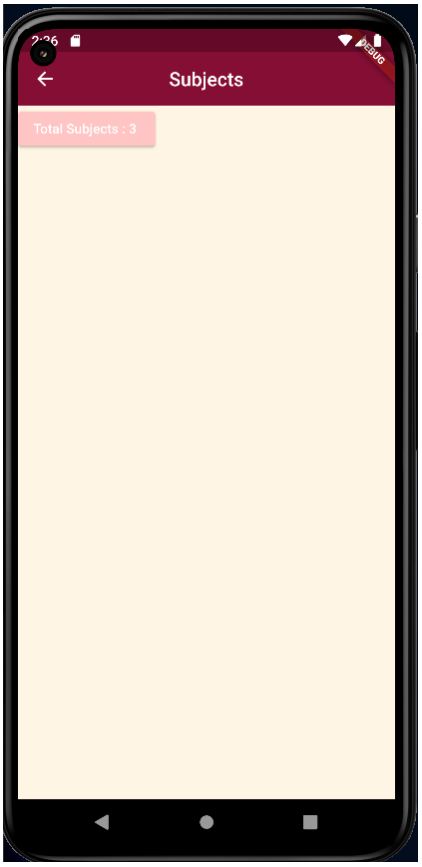
home.dart

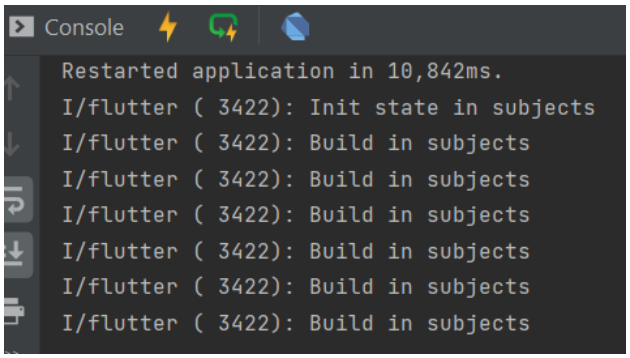




We have set counter such that each time we will press button it will increment number of subjects and print line in colsole.







```dart
void getData() async {
  /*Future.delayed(Duration(seconds: 4),() {
    print('University : DDU');
  }
  );*/
  String username = await Future.delayed(Duration(seconds: 4), () {
    return 'University : DDU';
  });

  /*Future.delayed(Duration(seconds: 2),() {
    print('Dharmsinh Desai University');
  }
  );*/

  String bio = await Future.delayed(Duration(seconds: 2), () {
    return 'Dharmsinh Desai University';
  });

  print('$username -> $bio');

}

@override
void initState() {
  //super.initState();
  //print('Init state in subjects');
  //print('Before getData call');
  getData();
  //print('After getData call');
```

```
Console
Performing hot reload...
Syncing files to device Android SDK built for x86 64...
I/flutter ( 3422): Build in subjects
Reloaded 2 of 587 libraries in 1,810ms.
I/flutter ( 3422): Before getData call
I/flutter ( 3422): After getData call
I/flutter ( 3422): Build in subjects
I/flutter ( 3422): Inside getData
```

```
Console
Performing hot reload...
Syncing files to device Android SDK built for x86 64...
I/flutter ( 3422): Build in subjects
Reloaded 1 of 587 libraries in 821ms.
I/flutter ( 3422): Build in subjects
I/flutter ( 3422): Dharmsinh Desai University
I/flutter ( 3422): University : DDU
```

Using async await output would be as below:

```
Console
Performing hot reload...
Syncing files to device Android SDK built for x86 64...
I/flutter ( 3422): Build in subjects
Reloaded 1 of 587 libraries in 1,091ms.
I/flutter ( 3422): Build in subjects
I/flutter ( 3422): University : DDU -> Dharmsinh Desai University
```

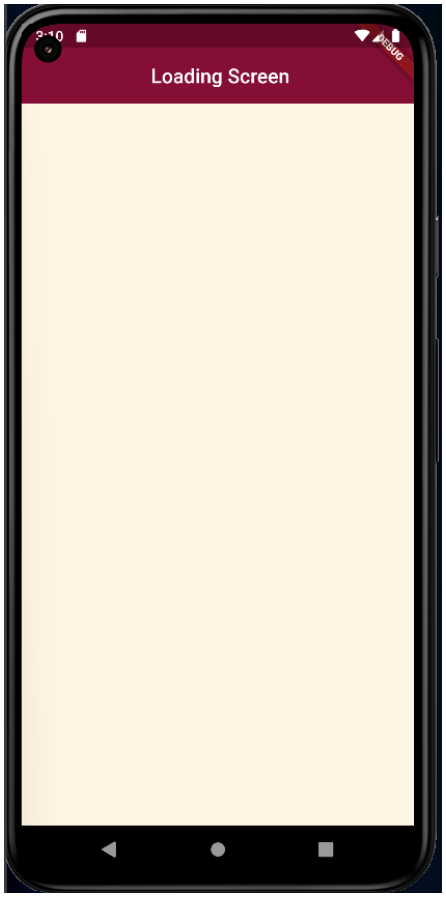
Now we will use fake api for json. Below is the code for that. In code, we have defined one method using async await in order to get synchronized outout. The final output would be shown in console.

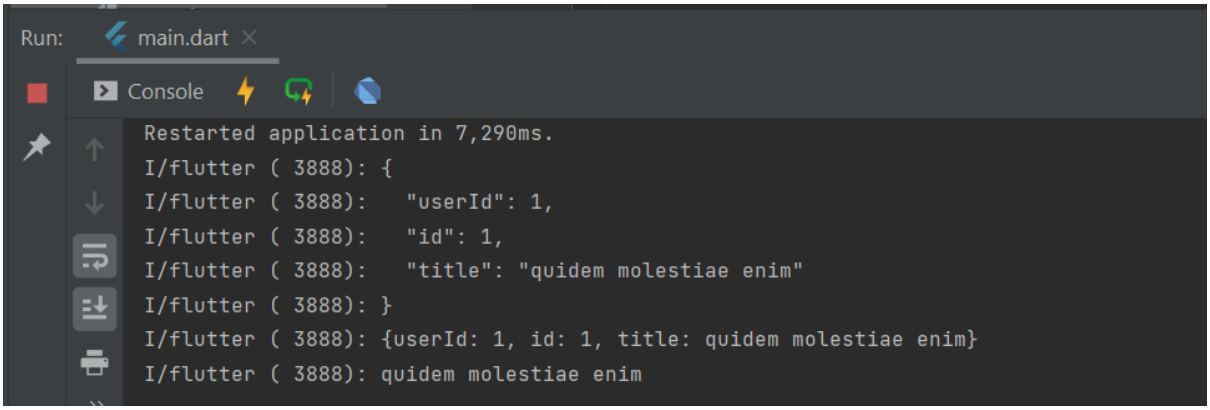
First print statement will print whole response fetched by api. Then second statement will print data part. In third statement we are printing only title from all the data.

Add this code into pubspec.yaml in order to include http package.

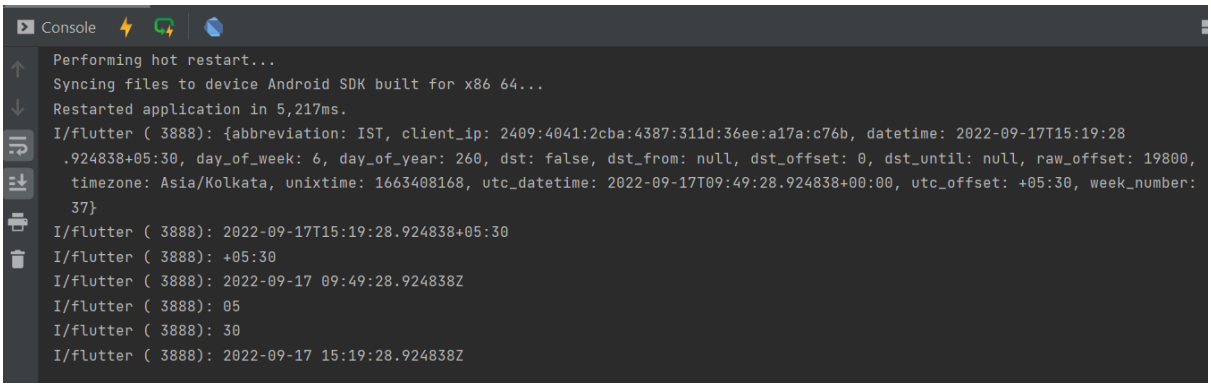
```yaml
dependencies:
  flutter:
    sdk: flutter
  http: ^0.13.5
```

```dart
class _LoadingState extends State<Loading> {
  void getData() async {
    final response = await get(Uri.parse('https://jsonplaceholder.typicode.com/albums/1'));
    print(response.body);

    Map data = jsonDecode(response.body);
    print(data);
    print(data['title']);
  }

  @override
  void initState() {
    // TODO: implement initState
    super.initState();
    getData();
  }
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Color(0xffFFF5E4),
      appBar: AppBar(
        title: Text(' Loading Screen'),
        centerTitle: true,
        backgroundColor: Color(0xff850E35),
        elevation: 0.0,
      ),  // AppBar
    );  // Scaffold
```

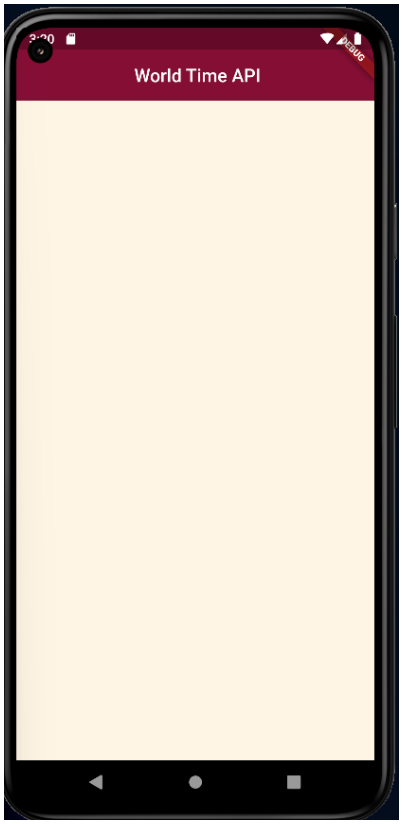




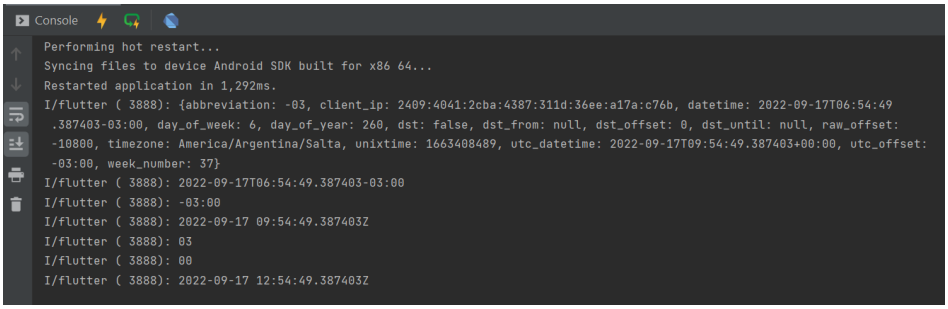
World Time API



```dart
void getTime() async {
  // Make Request for time and receive response
  Response response = await
  get(Uri.parse('http://worldtimeapi.org/api/timezone/America/Argentina/Salta'));
  Map timeData = jsonDecode(response.body);
  print(timeData);

  // Get particular property form timeData...
  String dateTime = timeData['datetime'];
  String offset = timeData['utc_offset']; //not dst_offset
  print(dateTime);
  print(offset);
  DateTime currentTime = DateTime.parse(dateTime);
  print(currentTime);

  String offsetHours = offset.substring(1,3);
  print(offsetHours);
  String offsetMinutes = offset.substring(4,6);
  print(offsetMinutes);
  currentTime = currentTime.add(Duration(minutes:
  int.parse(offsetMinutes),hours:int.parse(offsetHours)));
  print(currentTime);
}
```



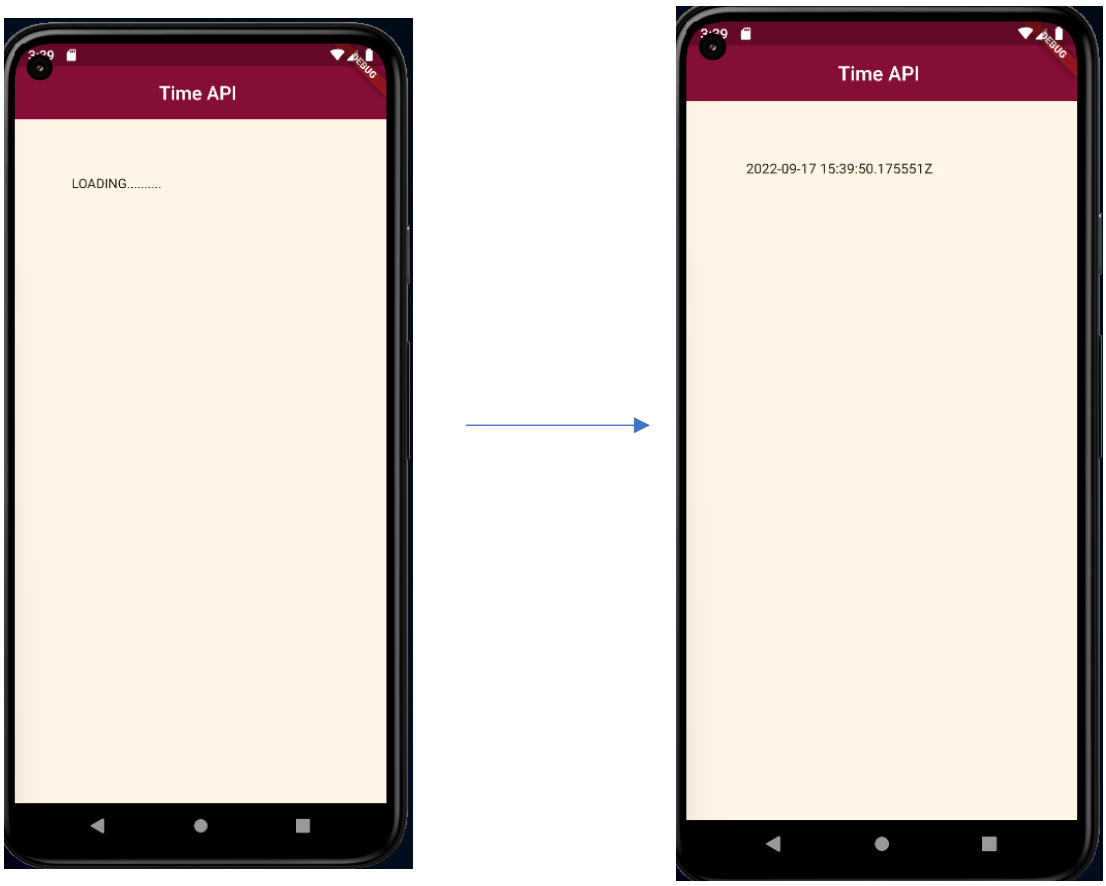
We can set any region. First we have retrived time of Kolcutta, Then Salata.



Now we will print this time on our device screen. For that create two files and add below code into it.

```dart
class _LoadState extends State<Load> {
  String? time = 'LOADING.....';
  void setWorldTime() async {
    WordTime timeinstance =
    WordTime(location: 'kolkata',flag: 'india.png',url: 'Asia/Kolkata');
    await timeinstance.getTime();
    setState(() {
      time = timeinstance.time;
    });
  }

  @override
  void initState() {
    super.initState();
    setWorldTime();
  }
```

```dart
class WordTime {
  String? location;
  String? time;
  String? flag;
  String? url;

  WordTime({ this.location,this.flag,this.url });
  Future<void> getTime() async {
// Make Request for time and receive response
    Response response = await
    get(Uri.parse('http://worldtimeapi.org/api/timezone/$url')); // Asia/Kolkata
    Map timeData = jsonDecode(response.body);
// Get particular property form timeData...
    String dateTime = timeData['datetime'];
    String offset = timeData['utc_offset']; //not dst_offset
    String offsetHours = offset.substring(1,3);
    String offsetMinutes = offset.substring(4,6);
// create DateTime object
    DateTime currenttime = DateTime.parse(dateTime);
    currenttime = currenttime.add(
        Duration(minutes:
        int.parse(offsetMinutes),hours:int.parse(offsetHours)));
//set the time property of class...
    time = currenttime.toString();
  }
```



GitHub Link:

https://github.com/DhruviSherathiya/SmartDeviceProgramming/tree/main/Lab10